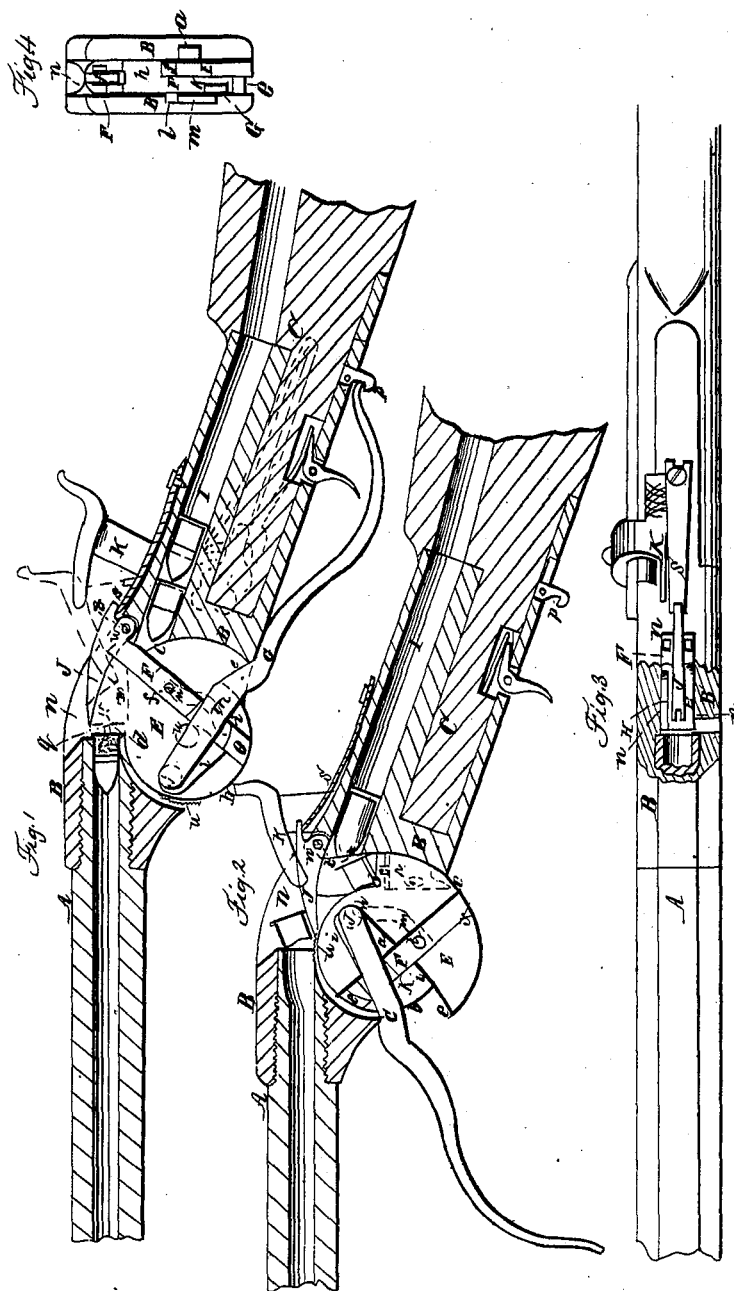


C. M. SPENCER.**Magazine Gun.****No. 27,393.****Patented Mar. 6, 1860.**

Witnessed
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UNITED STATES PATENT OFFICE

C. M. SPENCER, OF SOUTH MANCHESTER, CONNECTICUT.

IMPROVEMENT IN SELF-LOADING FIRE-ARMS.

Specification forming part of Letters Patent No. 27,393, dated March 6, 1860.

To all whom it may concern:

Be it known that I, C. M. SPENCER, of South Manchester, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Breech-Loading Fire-Arms; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a longitudinal sectional view of the breech and parts of the stock, magazine, and barrel of a gun with my improvement, exhibiting it in condition for firing. Fig. 2 is a similar sectional view, but exhibiting the parts in condition in their relative positions at one stage in the operation of loading. Fig. 3 is a top view of the same, having the breech-holder partly broken away to expose the breech. Fig. 4 is a transverse section right through the breech. Fig. 5 is a side view of the breech separate from the gun.

Similar letters of reference indicate corresponding parts in the several figures.

My invention consists in an improved mode of locking the movable breech of a breech-loading fire-arm, whereby it is easily opened and closed, and very firmly secured in place during the explosion of the charge.

It also consists in certain contrivances for operating in combination with the movable breech for the purpose of withdrawing the cases of the exploded cartridges from the chamber of the barrel and for conducting new cartridges thereinto from a magazine in the stock.

To enable those skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

A represents the barrel screwed into the breech-holder B, which is secured by screws to the stock C. E is the movable breech, which is of the rolling kind, consisting of a plate of steel of a thickness greater than the diameter of the bore of the barrel, provided with a pivot or journal, *a*, on one side, which is fitted to turn in a bearing in one side of the breech-holder B, a portion, B', of whose opposite side is made movable to permit the introduction of the breech, which fits within a parallel cavity in the said holder. The periph-

ical form of the breech is that of two arcs, *b* *c*, of different radius, concentric with the journal *a*, united by planes *d* *e*, nearly radial to the center of the said journal. The plane *d* constitutes the face of the breech. In the opposite side of the breech E to the journal *a* there is provided a groove, *e*, which meets a slot, *f*, cut right through the breech, said groove and slot being in line with each other, and one forming, as it were, a continuation of the other to receive the sliding bolt F, by which the breech is forced up toward the rear of the barrel. The broad part *h* (see Fig. 4) of this bolt, which is received in the slot *f*, is made wedge-shaped at its end to act as a wedge against the back of the opening *n* in the top of the breech-supporter, for the purpose of forcing the face of the breech up toward the barrel and locking the breech in condition for firing.

In the same side of the breech as the groove *e* there is formed a cavity, *i*, to receive the lever G, by which the breech is operated, said cavity being of less depth than the groove *e*, and of a width sufficient to permit the lever to move some distance in a direction corresponding or parallel with the movement of the breech without imparting any movement thereto. The said lever is attached to the breech by being furnished with a stud, *j*, which enters a hole in the back of the cavity *i*.

In the outer side of the sliding bolt F there is formed a recess, *k*, to receive the lever G, which is arranged to lie across the said bolt, and to the same side of the said bolt F there is rigidly attached a pin, *l*, which enters a recess, *m* *m'*, in the movable plate B' of the breech-holder. The form of this recess, which is indicated in dotted outline in Figs. 1 and 2, is that of an arc, *m*, concentric to the journal *a* of the breech, with an offset, *m'*, at the upper end.

The lever G constitutes the trigger-guard, and when the breech is shut, as shown in Fig. 1, the rear end of the said lever is caught by a spring-catch, *p*, arranged under the breech-holder B, and in this position of the lever the bolt F enters the opening *n* and locks the breech in a closed condition.

The face *d* of the breech need not be fitted to make a tight joint with the rear muzzle of

the barrel, as the joint may be made tight by the flange at the rear end of a metallic cartridge, as shown in Fig. 1, where a cartridge is shown in the chamber in red outline.

To open the breech, the catch *p* is pulled back to liberate the lever *G*, and the said lever is then drawn down away from the stock. During the first part of the movement of the said lever the breech does not move with it, owing to the play provided in the cavity *i* for the purpose of enabling the breech to be unlocked by drawing the bolt *F* from the opening *n*; but by the time the bolt *F* is drawn the lever comes in contact with the side of the cavity *i*, and moves the breech to the position shown in Fig. 2, thus permitting a cartridge to be introduced by hand through the rear muzzle of the barrel, or permitting one to be received in front of the face *d* of the breech from the magazine *I* that is formed in the stock.

In moving the lever back to close the breech the lever does not move in the cavity *i* till the breech is nearly closed, but it is caused to move the breech by the pin *l* of the bolt being confined to the concentric portion *m* of the groove *m m'*. Just as the breech is nearly closed the pin *l* arrives in the offset portion *m'* of the groove *m m'*, and permits the bolt *F* to be moved up into the opening *n* to tighten and lock the breech by the movement of the lever *G* in the cavity *i* of the barrel.

In the side of the breech *E* opposite to that on which the lever *G* is arranged is a cavity to receive a slide, *H*, upon which the hammer *K* acts to cause the explosion of the charge. The cartridge is intended to contain in its rear part percussion priming, which will be caused to explode by being punctured, and the slide *H* is furnished with a point, *q*, of suitable character to produce such puncture when the said slide is driven forward by the hammer falling against it. The said slide is attached to the breech by a screw or pin, *r*, which passes through a slot in the slide and is fast in the breech.

On the smaller arc, *b*, of the face of the breech there is a narrow serrated projection, *u*, whose duty is to catch the flanges of the cases of the exploded cartridges, and to pull them out from the chamber as the breech opens;

and in the opening *n* of the breech-holder there is arranged a tongue, *J*, which is hinged at *t* to the breech-holder at the back of the said opening, and which has a spring, *s*, so applied as to cause its front extremity always to bear upon the breech. This tongue, as the breech opens, drops down over the face *d* into the smaller arc of the breech, and so serves to prevent the exploded cartridge-case from dropping back into the cavity of the breech-supporter, and to guide it out of the said cavity as the serrated projection *u* draws it out of the chamber. This tongue also serves to prevent the cartridges dropping out of the magazine when the breech is opened, and to conduct them therefrom into a proper position in front of the face *d* of the breech, as shown in Fig. 1, to be forced into the chamber by the act of closing the breech.

The cartridges may be forced from the magazine *I*, as required, by a spring, or they may be made to drop, one at a time, into the cavity of the breech-holder, when the breech is opened, by holding the gun muzzle downward. As the breech closes it pushes the tongue *J* upward out of its way. To prevent the proper operation of the said tongue being obstructed by the locking-bolt, the end of the latter is grooved to let the tongue work in it, and the front end of the said tongue is grooved to allow the projection *u* to pass it without interference.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The combination of the rolling breech *E*, the lever *G*, and sliding locking-bolt *F*, the whole fitted and applied substantially as herein set forth.

2. The slide *H*, applied to the rolling breech, and operating in combination with the hammer, substantially as and for the purpose herein specified.

3. The combination of the serrated projection *u* on the rolling breech and the tongue *J*, applied and operating, substantially as herein described, within the opening in the breech-supporter.

C. M. SPENCER.

Witnesses.

J. S. STRONG,
M. WELLES.